

FIG. 1

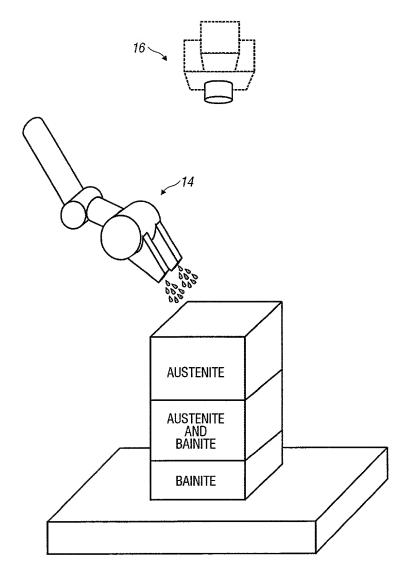


FIG. 1A

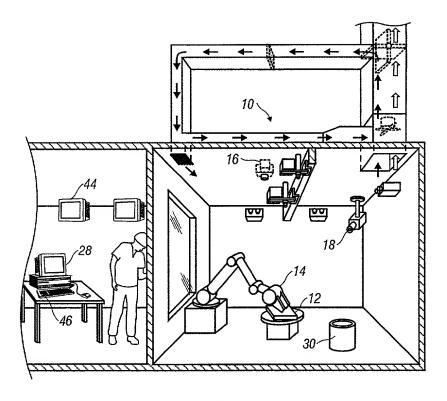
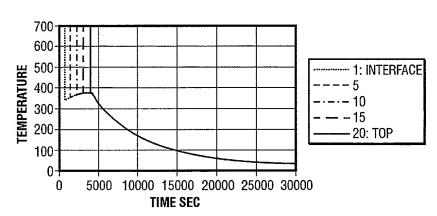
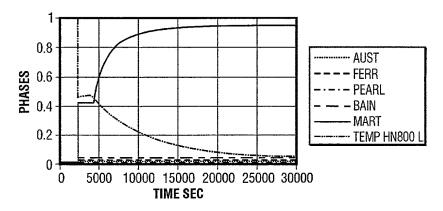


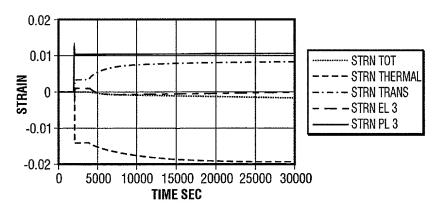
FIG. 2



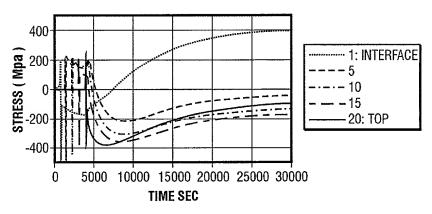
Temperature FIG. 3



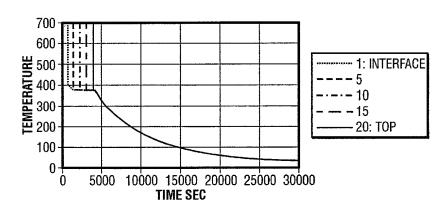
Phases, Position #10 FIG. 4



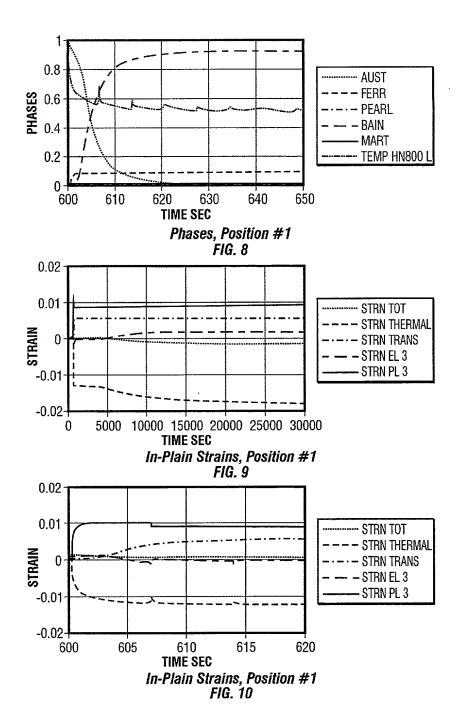
In-Plain Strains, Position #10 FIG. 5

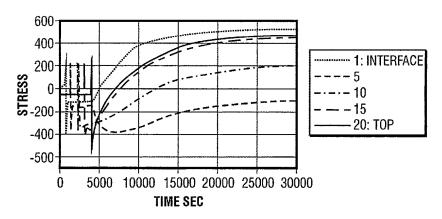


In-Plane Stress FIG. 6

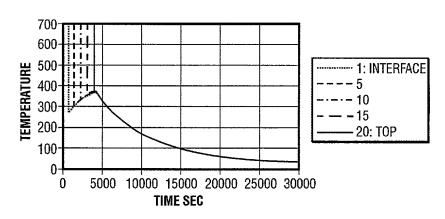


Temperature FIG. 7

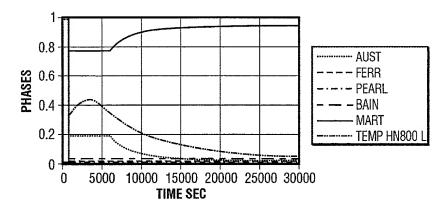




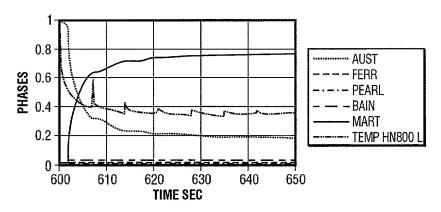
In-Plane Stress FIG. 11



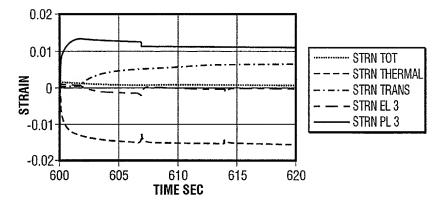
Temperature FIG. 12



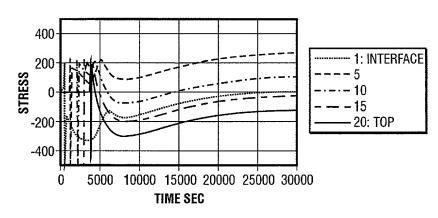
Phases, Position #1 FIG. 13



Phases, Position #1 FIG. 14



In-Plain Strains, Position #1 FIG. 15



In-Plane Stress FIG. 16

## WARPAGE IN 0.001 INCH FOR STEADY-STATE TEMP = 280° C 3.0 2.9 2.8 -0,032 -0.026 -0.014 -0.03 2.6 -0.016 -0.02 0.024 -0.012 2.5 -0.018 2.4 -0.016 2.3 -0.012 2.2 2.2-2.1-2.0-1.9-1.8--0.034 0.03 -0.026 -0.014 -0.024 -0.02 -0,016 1.7-1.6-1.5-1.4-1.3--0.026 1.2 +0.032 -0.024 -0.016 -Ò.02 1.1-1.0 <del>|</del> 325 -0.018

FIG. 17

350

POST TEMPERATURE ( C° )

355

360

365

375

370

345

340

335

330

## WARPAGE IN 0.001 INCH FOR STEADY-STATE TEMP = 320° C 3.0 2.9 2.8 +0,022 2.7 -0.016 -0.004 2.6 0.01 -0.006 -0.014 -0.002 2.5 -0.008 2.4 0.006 2.3 -0.002 **BOST TIME (Hrs)** 2.21 2.01 1.91 1.81 2.2 -0.004 0.02 -0.016 -0.004 1.9--0.014 -0,01 -0.006 -0.008 1.7 -0,006 1.6 1.5 1.4-1.3--0.018 1.2 +0.024 -0.014 -0.006 -0.01 1.1 -0.008 -0.006 -0.01 1.0 1.0 325

FIG. 18

350 POST TEMPERATURE ( C° )

345

360

355

365

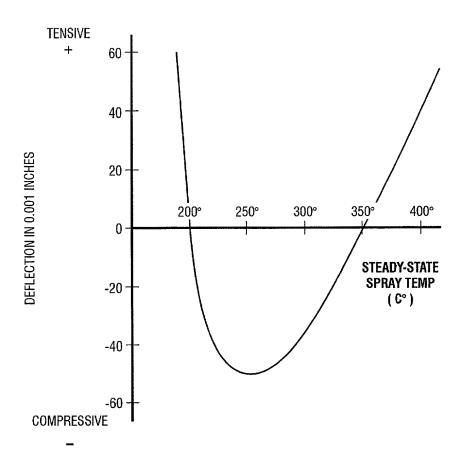
370

375

340

335

330



WARPAGE ( OUT OF FLATNESS ) OF SPRAYED METALLIC PLATE VS. STEADY STATE SPRAY TEMPERATURE

FIG. 19